

Chapter 5.10

Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillator (AED) Program

This could be you . . .

An employee began having chest pain shortly after coming to work. Minutes later, he collapsed on the floor. A fast acting employee called 33333 and shouted for help. After evaluating the patient and starting CPR another employee responded with an AED unit and was able to shock the heart into a normal rhythm.

1. Who must follow this chapter

You shall follow this chapter if you work at JSC or a JSC field site.

2. What this chapter covers

This chapter defines JSC's Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillator (AED) program including training, maintenance, certification, auditing and placement. JSC is committed to improving the chances of survival for any employee or visitor that may suffer from sudden cardiac arrest.

3. Why CPR and AED's are important

JSC shall follow the guidelines of the American Heart Association (AHA) for Public Access to Defibrillation and JSC is committed to providing AED capability within 5 minutes to all locations at JSC. This is accomplished by a combination of Ambulance and Fire Protection Specialists emergency responders and placement of AEDs in facilities across JSC.

Note: Each year, at least 250,000 Americans die of sudden cardiac arrest before they reach the hospital. Sudden cardiac arrest strikes people of all ages and all degrees of fitness usually without warning. Many of these lives can be saved if bystanders quickly phone the JSC emergency numbers (33333/44444/911), begin CPR and use an AED. Figure 5.10-1 illustrates the coordinated set of actions to improve survival.



Figure 5.10-1: American Heart Association Chain of Survival

4. Elements of a complete AED/CPR program

JSC's AED/CPR program shall include these five program elements:

- a. **Management Support:** Agreement about the goals, responsibility, implementation requirements and costs of the program.
- b. **Employee Participation:** Demonstrated by recognizing the signs and symptoms of a heart attack, knowing the chain of survival and volunteering to be a CPR/AED lay responder.
- c. **Emergency Responders:** Designated fire protection specialists, health care professionals and others whose primary duty is emergency response.
- d. **Training:** Managers, supervisors, and employees in the CPR/AED program knowledgeable in their role.
- e. **AED Placement:** Assessing the proper number and placement of AED's and supplies.

5. Involvement in JSC's CPR and AED program

The following individuals shall be involved in JSC's CPR and AED program:

- a. If you are a **manager**, you must be committed to maintaining the AED equipment provided as part of your commitment to maintaining a safe and healthful workplace. You shall:
 1. Assign a person to maintain the AED and associated equipment located in your facility. Nominally this person should be the primary or alternate facility manager.
 2. Ensure that your facility Emergency Action Plan includes the cardiac chain of survival and the location of any AED's in the building.
- b. If your job **requires** you to be certified in CPR or AED operation (e.g., Physician, Nurse, Paramedic, Fire Protection Specialist, Childcare Worker, Electricians) you shall maintain training and certification through the AHA, American Red Cross (ARC), or National Safety Council (NSC).
- c. If you are an **employee** at JSC, your participation is needed to make the CPR/AED program a success. You may participate by:

1. Learning the risk factors and take steps to prevent cardiovascular disease.
2. Learning the signs and symptoms of heart attacks and immediately call the emergency numbers if you or a co-worker experience chest pain.
3. Volunteering to be a lay rescuer by learning CPR and how to use an AED.

6. Who may perform CPR and use an AED

To perform CPR or use an AED, you shall have a current certification by the AHA, ARC or NSC.

7. Placement of AED's

JSC has an established AED program. You can find details about the AED program including locations at: <http://sd.jsc.nasa.gov/omoh/scripts/HumanTestSupport.aspx>. The JSC Crash Cart and AED working group will decide future placement of AED's and placement shall meet the following criteria:

- a. Are more than 200 employees assigned to the building during normal working hours?
- b. Do workers engage in activities that increase risk (on second or third shift when the JSC Clinic is closed, e.g. exercise facilities, electrical, machine shops, printing, etc.?)
- c. Is the facility remote from the JSC Clinic or JSC Emergency Responders such as Ellington Field or the Sonny Carter Training Facility?
- d. Is this a multi-story building or a building with a configuration that may slow the Fire Protection Specialist or Emergency Medical Technician response?

8. CPR and AED Training Program

JSC offers free CPR and AED training with sign-up through SATERN. In the course catalog, search for "JSC-OHS-CPR" This training consists of two classes: Adult CPR/AED and an optional Child/Infant CPR. These courses provide JSC workers with AHA certification in Adult CPR/AED and Child/Infant CPR. The training combines lecture, video demonstrations, take-home manuals, and hands-on manikin training and also includes a description of AED's located throughout JSC. Classes are small in size and fill quickly so it is important you attend on the scheduled day.

The AHA and NSC require that you recertify every two years, the American Red Cross requires retraining annually.

Facility managers or their designees shall be trained to perform the maintenance check by the Clinical Services Branch.

10. Responsibilities for the JSC CPR and AED program

The following have responsibilities in the JSC CPR and AED program:

- a. The Clinical Services Branch has overall responsibility for the formal CPR/AED program. Clinical Services shall:
 1. Assign the AED Program Coordinator
 2. Develop operational protocols and procedures to be included in the JSC Emergency Preparedness Plan.
 3. Assist other organizations in developing specific programs
 4. Train employees.
 5. Review and approve/reject requests for AED's
 6. Audit AED maintenance, record discrepancies in HATS.
- b. Facility Manager's or their designees are responsible for maintaining the AED's in cooperation with the Clinical Services Branch and shall:
 1. Inspect the AED and accessory bag weekly. Record the results of the inspection on the sheet provided.
 2. Report discrepancies to the JSC AED coordinator at the number listed on the AED. The number is x25724 or x25728.
 3. Detailed instructions on AED maintenance, inventory and blank inspection sheets are found in the JWI 1040.12, JSC Emergency Preparedness Plan, Annex H.

11. Legal concerns

Most states including Texas have passed "Good Samaritan Laws" to protect those who, in good faith, administer emergency care including using an AED at the scene of an emergency from liability in civil damages unless you are willfully or wantonly negligent. This is covered in greater detail in the CPR and AED class.

13. What if happens if you actually perform CPR or use an AED

Following the administration of CPR and/or the use of an AED, the AED physician director shall review the incident with you. This review is intended to provide feedback to improve our program if necessary. Additionally, you will be offered an opportunity to schedule a stress debriefing with the Employee Assistance Office to discuss the event, patient outcome and receive information on post-incident reaction management.

15. For more information on CPR and AED's

You can find more information about CPR and AED's at:

- a. Human Test Support Group: <http://sd.jsc.nasa.gov/omoh/scripts/HumanTestSupport.aspx>
- b. American Heart Association: www.americanheart.org
- c. American Red Cross: <http://www.redcross.org/services/hss/courses/>